

Methodology for Estimating CasualtiesA. Fixed Targets

The basic method of determining casualty estimates for attacks on individual fixed targets rests on a casualty prediction methodology developed by US intelligence analysts. This method is essentially an application of the predictable lethal effects of given types of ordnance to known target environments, particularly their population density. These factors are applied in conjunction with roof cover bomb damage assessments based on photographic analysis, and operations reports from specific attack missions. A number of casualties is determined by multiplying the average lethal area of the bombs dropped in target areas by the population density of the area and the number of structures in the area. These estimates are expressed in a broad range of minimum and maximum casualties.\* The maximum figures assume that the population in the target area was unwarned; the minimum figures assume warning and full resort to civil defense and protective measures.

The casualty estimates derived by US intelligence specialists are weighted by CIA on the basis of sample evidence of actual casualties obtained from Prisoner of War (POW) reports.

25X1D

25X1C

25X1C

We have found fairly consistently that the initial attacks on JCS targets have inflicted casualties that are four times greater than the minimum military estimates. Consequently, we have adjusted the military estimates of minimum number of casualties by a factor of four for all initial strikes on fixed targets, and accepted the minimum estimate for all targets undergoing restrikes.

B. Armed Reconnaissance1. Civilian Casualties

25X1D

25X1D

The CIA estimates of casualties resulting from armed reconnaissance strikes are expressed through a casualty/sortie rate derived from extensive analysis

A daily casualty factor derived from our analysis of Route Package 2 was expanded to cover all of the six route packages in North Vietnam, with adjustments made to account for differences in the population

\* The maximum figure would generally be 10 times greater than the minimum.

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density, the number of sorties or alternatively the tons of bombs dropped, and days of air action in each route package area.

2. Military Casualties

25X1D

25X1D

The information base for estimating military casualties resulting from armed reconnaissance missions is extremely poor, [REDACTED]

25X1D

The estimate of military casualties is, therefore, based on pilot reports of the number of targets destroyed or damaged, weighted by Defense Intelligence Agency (DIA) factors for the probable number of casualties to be expected for each type of target destroyed or damaged. In two specific categories -- trucks and watercraft -- the DIA casualty weights were decreased to reflect the information gained from POW reports [REDACTED] In view of the poor data base available the estimates of military casualties resulting from armed reconnaissance are probably the most unreliable of all our casualty estimates.

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